

ORIGINAL INSTRUCTIONS

PUMA 185
PUMA 200
PUMA 220
Multicontroller
Tractor - Tier 4B (final)
*PIN HACPU****HE501001 and above*

OPERATOR'S MANUAL

Part number 48072362

1st edition English

December 2017



Contents

1 GENERAL INFORMATION

Metric and imperial units abbreviations.....	1-1
To the owner.....	1-3
Operator's manual storage.....	1-5
Product identification.....	1-6
Engine identification.....	1-7
Drive line identification.....	1-8
Cab identification.....	1-8
Ecology and the environment.....	1-9
Programming tractor functions.....	1-10
Before operating the tractor.....	1-11
International symbols.....	1-12
Machine stability.....	1-13
Selective Catalytic Reduction (SCR) system.....	1-17

2 SAFETY INFORMATION

Safety precautions.....	2-1
Safety decals.....	2-3
Safety rules.....	2-12
Burn prevention.....	2-19
Prevention of fire or explosions.....	2-20
Fire extinguisher.....	2-21
Protection offered by the tractor.....	2-22
Hazardous substances.....	2-25
Emergency exit.....	2-26
Wheel chocks.....	2-27
Intended use statement.....	2-28
Instructor's seat.....	2-30

3 CONTROLS AND INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Introduction.....	3-1
Cab air filters.....	3-5
In cab storage (where fitted).....	3-6
Cable and wiring routing.....	3-7
Mobile telephone usage.....	3-7
Implement monitor installation.....	3-8
Cab air pressurisation control (where fitted).....	3-9

OPERATOR'S SEAT

Operator's seat.....	3-10
Air suspension seat deluxe.....	3-11
Air suspension seat with passive or Dynamic Damping System (DDS).....	3-16
Air suspension seat 'evolution active'.....	3-22
Seat belt.....	3-29

INSTRUCTOR'S SEAT

Instructional seat	3-30
--------------------------	------

FORWARD CONTROLS

Ignition key	3-31
Hazard lights switch	3-31
Lights and turn indicator lever	3-32
Windshield wiper and washer controls	3-33
Electronic parking brake	3-34
Clutch pedal	3-38
Foot brakes	3-38
Exhaust brake (where fitted)	3-42
Steering column	3-42

LEFT-HAND SIDE CONTROLS

Handbrake	3-43
-----------------	------

RIGHT-HAND SIDE CONTROLS

Integrated control panel	3-44
Hand throttle	3-45
Multi function handle	3-45

REARWARD CONTROLS

Switches on C-pillar	3-46
Battery isolator switch (where fitted)	3-47
Heated screens (where fitted)	3-48
ISO bus functionality	3-49
Hydraulic master switch	3-50
Switches on right-hand trim	3-51
Advanced steering system field/road switch	3-52
Variable Ratio Steering (VRS)	3-53
Autoguidance system	3-56
Autoguidance - Variable ratio steering	3-57

OVERHEAD CONTROLS

Switch panel work lights	3-58
Left-hand and right-hand outermost work light switch	3-59
Interior light	3-60
Climate controls	3-61
Manual temperature control	3-62
Automatic Temperature Control (ATC)	3-63

INSTRUMENT CLUSTER

Integrated control unit	3-65
Gauges	3-65
Indicator and warning lights	3-66

Displays	3-69
Keypad basic	3-70
Keypad enhanced	3-71
Selecting or changing the display settings	3-73
Adjust menu	3-74
Configure menu	3-79
Performance monitor	3-82
Armrest color display	3-90
Pop-up screens on color display	3-91
Performance monitor on color display	3-96
Programming the displays	3-101
Alarm functions	3-104
Accessing stored error codes	3-106
Selective Catalytic Reduction (SCR) exhaust treatment - Overview	3-107
Warning and advisory symbols	3-116

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

Refueling the tractor	4-1
-----------------------------	-----

STARTING THE UNIT

Starting the engine	4-3
Grid heater cold start aid (where fitted)	4-5
Fuel heater (where fitted)	4-5
Coolant immersion heater (where fitted)	4-6
Transmission oil heater (where fitted)	4-7
Boosting the battery	4-8

STOPPING THE UNIT

Stopping the engine	4-9
Automatic engine shut down with enhanced keypad (where fitted)	4-10

MOVING THE UNIT

Operating in cold temperatures	4-11
Low idle speed management	4-13
Reversible engine fan	4-14

5 TRANSPORT OPERATIONS

ROAD TRANSPORT

Safe transport speed	5-1
----------------------------	-----

PREPARING FOR ROAD TRANSPORT

Carrying the tractor on a transporter	5-2
Secure the high visibility roof panel	5-2

RECOVERY TRANSPORT

Freeing a stuck tractor.....	5-3
Towing the tractor.....	5-4

6 WORKING OPERATIONS

GENERAL INFORMATION

Variable engine power management	6-1
Constant engine speed	6-3
Differential lock	6-6
Four wheel drive.....	6-8
Front axle suspension (where fitted)	6-10
Automated headland functions	6-12
Headland turn sequence - Quick guide.....	6-12
Recording and replaying	6-14
Explanation of symbols.....	6-17
Recording a sequence	6-19
Replaying a sequence.....	6-21
Headland function and color display screen.....	6-25
Deleting a sequence with color display.....	6-28
Automated headland functions	6-29
Headland turn sequence	6-29
Universal Symbols.....	6-30
Recording a sequence	6-31
Replaying a sequence.....	6-35
Saving a sequence	6-38
Edit a sequence	6-41
Recalling a sequence.....	6-45
Deleting a sequence.....	6-49

TRANSMISSION

Full powershift transmission.....	6-52
Foot throttle pedal	6-52
Transmission operation.....	6-53
Powershift transmission controls	6-54
Transmission shuttle shift lever.....	6-55
Setting the sharp shuttle function.....	6-56
Transmission display	6-57
Driving the tractor.....	6-58
Speed matching	6-60
Auto shift function	6-61
Auto shifting field mode.....	6-62
Auto shifting in road mode.....	6-65
Setting the forward and reverse gear ratios	6-68
Creeper gears (where fitted)	6-69
Fault codes	6-70
Ground speed chart powershift transmission Ground speeds	6-71

REAR POWER TAKE-OFF (PTO)

Power Take-Off (PTO) operating precautions	6-76
Changing the PTO output shaft	6-77
Attaching PTO driven equipment	6-78
PTO operation	6-79
PTO 2 speed system	6-84
External PTO controls	6-86
Auto PTO operation	6-88

FRONT POWER TAKE OFF

PTO operation	6-91
Auto PTO operation	6-94

REAR HITCH

Electronic Draft Control (EDC)	6-96
Settings and adjustments	6-100
Electronic Draft Control (EDC) operation	6-102
External hitch controls	6-108

FRONT HITCH

Settings and adjustments	6-110
Front hitch operation	6-113
External hitch controls	6-120
Auxiliary front couplers (where fitted)	6-121
External controls for front couplers	6-123

HYDRAULIC REMOTE CONTROL VALVES

Remote control valves	6-124
Operating with remote valves	6-127
Connecting remote cylinders	6-130

ELECTRO-HYDRAULIC REMOTE CONTROL VALVES (where fitted)

Remote control valves	6-132
Settings and adjustments	6-140
Valve priority	6-146
Programming tractor functions	6-148
Connecting remote cylinders	6-155
Operating with remote valves	6-158
Joystick operation with a front loader	6-160
Mid mount remote valves	6-165
EHR implement control setting	6-167
External EHR controls	6-171
Transmission rear axle and hydraulic system oil level	6-172

HYDRAULIC POWER BEYOND PORT

Power beyond circuit	6-174
----------------------------	-------

Power beyond valve - Static description	6-174
ISO Power beyond couplings.....	6-176

THREE POINT HITCH

Attaching three-point hitch equipment.....	6-177
Lift rod adjustment.....	6-179
Top link adjustment.....	6-182
Lower links	6-184
Quick hitch.....	6-185
Lower links	6-187

DRAWBARS AND TOWING ATTACHMENTS

Drawbars and towing attachments	6-191
Swinging drawbar	6-194

TRAILER BRAKING SYSTEMS

Trailer brake release switch	6-197
Air-operated trailer brakes (Universal type)	6-198
Air-operated trailer brakes (UK type).....	6-201
Auxiliary air supply connector (where fitted).....	6-202
Hydraulic trailer brakes (Universal type - Dual line)	6-203
Hydraulic trailer brakes (Universal type - Single line)	6-206

WHEEL TRACK ADJUSTMENT

Front wheel track adjustment.....	6-207
Front wheel alignment.....	6-212
Steering stops	6-213
Front axle oscillation stops	6-214
Front wheel fenders	6-215
Rear wheel track adjustment	6-217
Flange type axle (where fitted)	6-217
Bar type axle (where fitted).....	6-221
Dual rear wheels (where fitted).....	6-228

BALLASTING AND TIRES

Ballasting and tires	6-231
Iron weights (where fitted).....	6-234
Liquid ballast	6-237
Tire inflation.....	6-239
Tire pressures and permissible loads	6-240

AUXILIARY POWER CONNECTIONS

Diagnostic socket.....	6-242
Trailer electrical socket	6-243
Electrical power connectors	6-244
Internal power connectors.....	6-244
External power connectors	6-246

ISO bus classes	6-248
ISO bus functionality	6-250
Reconfigurable inputs for ISO Bus function	6-258

7 MAINTENANCE

GENERAL INFORMATION

Introduction	7-1
Fuel requirement - Diesel fuel	7-2
Fuel - Storage, handling and transport	7-2
Biodiesel fuel - Biodiesel fuels	7-3
Engine oil change	7-5
Protective devices	7-6
Tractor jacking points	7-8
Engine oils	7-9
General specifications	7-10
Capacities	7-11
Organic Acid Technology (OAT) coolant	7-12

MAINTENANCE CHART

Maintenance chart	7-13
-------------------------	------

WHEN THE WARNING LAMP LIGHTS

Engine air cleaner	7-15
Fuel system water separator	7-16
Check the brake fluid level	7-17

EVERY 10 HOURS OR EACH DAY

Coolant level check	7-18
Checking the engine oil level	7-19
Remote valve collection bottle	7-19
Windscreen wash wipe	7-20
Air reservoir	7-20

FIRST 50 HOURS

Service operations	7-21
--------------------------	------

EVERY 50 HOURS

Cab air filters	7-23
Selective Catalytic Reduction (SCR) system	7-25
Clean the coolers	7-26
Grease fittings	7-27
Check the front and the rear wheel nuts	7-34
Tire inflation pressures	7-34

EVERY 100 HOURS

Drive belts - check	7-35
Drive belts - check	7-36

EVERY 300 HOURS

Battery fluid level	7-37
Transmission oil level.....	7-39
Handbrake.....	7-40
Front PTO oil level.....	7-40
Front axle oil - Four-Wheel Drive (4WD)	7-41

EVERY 600 HOURS

Change engine oil and filter	7-42
Change the first stage fuel filter and the fuel filter element.....	7-44
Engine air precleaner.....	7-46
Charge pump hydraulic filter	7-47
Check the air intake system	7-48
Transmission	7-49
DEF/AdBlue® in-line filter	7-49

EVERY 1200 HOURS OR ANNUALLY

Cab air filters	7-50
Change the hydraulic suction pump oil filter.....	7-51
Differential and planetary oil.....	7-52
Front hubs - 4WD.....	7-53
Front PTO change oil.....	7-53
Grease the rear axle shaft bearing	7-54

EVERY 1200 HOURS OR EVERY 2 YEARS

DEF/AdBlue® filter	7-55
Change the engine air cleaner inner element	7-56
Engine tappet valve clearance	7-57
Air-operated trailer brakes	7-57
Poly (V) belts change.....	7-58
Change transmission oil.....	7-60

EVERY 2 YEARS

Change the air conditioning receiver drier.....	7-61
---	------

EVERY 1800 HOURS OR EVERY 2 YEARS

Engine - breather filter replacement.....	7-62
---	------

EVERY 3600 HOURS OR EVERY 2 YEARS

DEF/AdBlue® filter	7-62
--------------------------	------

EVERY 3600 HOURS OR EVERY 4 YEARS

Change the engine coolant fluid.....	7-63
--------------------------------------	------

GENERAL MAINTENANCE

Cleaning the tractor.....	7-67
---------------------------	------

Fuel system water separator	7-69
Bleeding the fuel system	7-69
Hydraulic system hoses	7-70
Brake Pedal	7-70
Cab suspension, if equipped	7-71
Headlight adjustment	7-72
Work light adjustment	7-72
Bulb replacement	7-73
Fuses and relays	7-76
Protecting the electronic and electrical systems during battery charging or welding ..	7-88
Battery removal and installation	7-89

STORAGE

Tractor storage	7-91
Removing the machine from storage	7-91

8 TROUBLESHOOTING

FAULT CODE RESOLUTION

Introduction	8-1
--------------------	-----

ALARM(S)

Fault codes and symbols	8-2
-------------------------------	-----

SYMPTOM(S)

Engine	8-4
Transmission	8-5
Hydraulics	8-6
Three-point hitch	8-6
Brakes	8-7
Cab	8-7
Electrical system	8-8

9 SPECIFICATIONS

General dimensions	9-1
General dimensions	9-1
Minimum turn radius	9-3
Axle dimension	9-4
Maximum permissible operating weights	9-5
Tractor weights	9-5
Capacities	9-6
Transmission - Capacity	9-6
Front axle system - Capacity	9-6
Engine	9-7
Transmission	9-8
Rear Power Take-Off (PTO)	9-9
Front Power Take-Off (PTO)	9-10
Hydraulic system	9-11
Three-point hitch	9-13

Remote control valves.....	9-13
Three-point hitch	9-13
Brakes	9-14
Steering.....	9-14
Electrical equipment.....	9-16
Minimum hardware tightening torques	9-17

10 ACCESSORIES

Radio (where fitted).....	10-1
External rear view mirrors	10-2
Auxiliary headlights.....	10-4
Rotating beacon	10-4
Front-end loader fixation points	10-5

11 FORMS AND DECLARATIONS

Service record 1st 50 hour, Owner copy	11-1
Service record 1st 50 hour, Dealer copy	11-3
Telematics module declaration of conformity.....	11-4

1 - GENERAL INFORMATION

Metric and imperial units abbreviations

Typical applications	Metric unit		Imperial unit	
	Name	Symbol	Name	Symbol
Area (Land area)				
	hectare	ha	acre	ac
	square meter	m ²	square foot	ft ²
	square millimeter	mm ²	square inch	in ²
			square inch	in ²
Electricity				
	ampere	A	ampere	A
	volt	V	volt	V
	microfarad	μF	microfarad	μF
	ohm	Ω	ohm	Ω
Force				
	kilonewton	kN	pound	lb
	newton	N	pound	lb
Force per length				
	newton per meter	N/m	pound per foot	lb/ft
			pound per inch	lb/in
Frequency				
	megahertz	MHz	megahertz	MHz
	kilohertz	kHz	kilohertz	kHz
	hertz	Hz	hertz	Hz
Frequency - Rotational				
	revolution per minute	r/min	revolution per minute	r/min ^a
		rpm		rpm
Length				
	kilometer	km	mile	mi
	meter	m	foot	ft
	centimeter	cm	inch	in
	millimeter	mm	inch	in
	micrometer	μm		
Mass				
	kilogram	kg	pound	lb
	gram	g	ounce	oz
	milligram	mg		
Mass per mass				
	milligram per kilogram	mg/ kg	parts per million	ppm
Power				
	kilowatt	kW	horsepower	Hp
	watt	W	Btu per hour	Btu/hr
			Btu per minute	Btu/min
Pressure or stress (Force per area)				
	kilopascal	kPa	pound per square inch	psi
			inch of mercury	inHg
	pascal	Pa	inch of water	inH ₂ O
	megapascal	MPa	pound per square inch	psi
	millibar	mbar		
	bar	bar		

1 - GENERAL INFORMATION

Typical applications	Metric unit		Imperial unit	
	Name	Symbol	Name	Symbol
Temperature (other than thermodynamic)				
	degrees Celsius	°C	degrees Fahrenheit	°F
Time				
	hour	h	hour	h
	minute	min	minute	min
	second	s	second	s
Torque (includes bending moment, moment of force, and moment of a couple)				
	newton meter	N m	pound foot	lb ft
			pound foot	lb in
Velocity				
	kilometer per hour	km/h	mile per hour	mph
	meter per second	m/s	foot per second	ft/s
	millimeter per second	mm/s	inch per second	in/s
	meter per minute	m/min	foot per minute	ft/min
Volume (includes capacity)				
	cubic meter	m ³	cubic yard	yd ³
				cu yd
	liter	l	cubic inch	in ³
	liter	l	US gallon	US gal
			UK gallon	UK gal
			US quart	US qt
			UK quart	UK qt
	milliliter	ml	fluid ounce	fl oz
Volume per time (includes discharge and flow rate)				
	cubic meter per minute	m ³ /min	cubic foot per minute	ft ³ /min
	liter per minute	l/min	US gallon per minute	US gal/min
	milliliter per minute	ml/min	UK gallon per minute	UK gal/min
Sound power level and sound pressure level				
	decibel	dB	decibel	dB
Water hardness				
	German hardness	°dH	English hardness	°e
	French hardness	°fH	parts per million	ppm

Glossary

Acronym	Definition
DEF	Diesel Exhaust Fluid
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
NOx	Nitrogen Oxide
PPE	Personal Protective Equipment
SCR	Selective Catalytic Reduction
ULSD	Ultra Low Sulfur Diesel
%	Percent
<	Less than
>	Greater than

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